Research Highlights

Measuring Quality of Care for Prostate Cancer

Prostate cancer is the most common solid malignancy diagnosed in American men. More than half of the new cases identified each year are clinically localized, an early stage of the disease in which the tumor is believed to be confined to the prostate. The usual treatment approaches include radical prostatectomy, radiation therapy, or watchful waiting.

Each year, more than 100,000 men newly diagnosed with prostate cancer must decide where and how to be treated. But the basis for choice is often unclear. Even untreated, most men with early stage prostate cancer have a life expectancy comparable to similarly aged men without prostate cancer, and there is no consensus on what constitutes quality care for this condition.

For many patients, treatment of prostate cancer has long-term complications, including urinary incontinence, impotence, and bowel dysfunction. However, the rates of these complications, as reported by different researchers and institutions in the scientific literature, vary substantially.

We need valid measures for assessing quality of care for prostate cancer, and we need to understand how variations in quality of care affect treatment outcomes. In *Prostate Cancer Patient Outcomes and Choice of Providers: Development of an Infrastructure for Quality Assessment*, Mark Litwin, Michael Steinberg, Jennifer Malin, and their colleagues take a critical first step toward these goals. Drawing on the scientific literature and the opinions of both clinical experts and patients, they have built the framework necessary to begin evaluating quality of care for this widespread disease.

Sources of Information About Quality of Care for Prostate Cancer

Quality has many dimensions, including the appropriateness of treatment, the skill with which it is provided, and outcomes for patients as reflected in their survival, their ability to function, and the quality of their lives. To capture all of these dimensions, the research team gathered information from a variety of sources.

- They reviewed and summarized the medical literature on both surgical and radiation treatment of localized prostate cancer.
- They interviewed physician experts in both surgical and radiation treatment of prostate cancer about what they consider essential to excellent-quality care.
- They conducted focus groups with patients and spouses to understand what information is most needed by men who face treatment decisions for newly diagnosed early stage prostate cancer.
- They convened a consensus panel to rate the clinical validity and feasibility of candidate quality indicators.

Developing Measures of Quality

Quality of care is usually assessed with three types of measures:

- *Structural measures* include characteristics of clinicians (for example, board certification or years of experience), organizations (staffing patterns or types of equipment available), and patients (type of insurance or severity of illness).

For more information

Litwin, Mark S., Michael Steinberg, Jennifer Malin, John Naitoh, Kimberly A. McGuigan, Rebecca Steinfeld, John Adams, and Robert H. Brook. *Prostate Cancer Patient Outcomes and Choice of Providers: Development of an Infrastructure for Quality Assessment*, Santa Monica, CA: RAND, MR-1227-BF, 2000.

- *Process measures*, the activities that transpire between patients and clinicians, include the ways in which physicians and patients interact and the appropriateness of medical treatment for a specific patient.
- *Outcomes measures* include changes in patients' current and future health, including health-related quality of life and satisfaction with care.

Quality assessment often also includes *covariates*—other factors that need to be considered when comparing quality of care across providers. For prostate cancer, covariates could include general health, family history of prostate cancer, and race.

Based on their review of the scientific literature, the interviews with physician experts, and the information derived from the focus groups, the research team proposed 59 candidate measures, spanning these three types of measures. The expert panel members suggested 36 additional measures. Of the 95 total candidate measures, the consensus panel endorsed 62 as appropriate for further evaluation.

In some cases, the expert panel endorsed indicators despite an absence of published evidence to support them. Examples include how frequently a physician provides the medical procedure in question and whether the physician is board certified.

To develop the final list of indicators, the research team synthesized the results from the expert panel, using the literature reviews, the interviews with experts, and the focus groups to provide relevant context.

Where Do We Go from Here?

Taking the next steps in measuring quality of care for prostate cancer requires broad-scale testing of the candidate quality measures. The research team's recommendations include field-testing the quality indicators in a national sample of institutions to determine the validity of the indicators and demonstrate their feasibility, and developing an education program for men newly diagnosed with early stage prostate cancer to help them interpret scientific data and use information about treatment outcomes in their treatment decision.

Quality of Care Measures for Prostate Cancer Endorsed by the Expert Panel

Measures of structure

- Number of patients a physician has treated
- Availability of radiation oncology facilities and psychological counseling for patients
- Board certification of urologists and radiation oncologists
- Information about outcomes for patients treated by an institution

Measures of process

- Assessing the stage of the disease before treatment begins
- Documenting a patient's pre-treatment urinary, sexual, and bowel function
- Assessing the family history of prostate cancer
- Giving the patient treatment choices, the opportunity to consult with an alternative treatment provider, and a clear description of the risk of treatment complications
- Having evidence that the institution where treatment is provided adheres to the practice protocol for managing pathology specimens as specified by the College of American Pathologists Cancer Committee
- Using computerized tomography to plan treatment for radiation therapy, immobilizing the patient during treatment while protecting rectal mucosa, and delivering recommended doses of radiation
- Following up with the patient at least twice during the first year after treatment
- Communicating with the patient's primary care physician to ensure continuing care
- Measuring the amount of blood lost during a radical prostatectomy

Outcomes measures

- Treatment failure detected by biochemical tests
- Hospitalization or medical or surgical treatment for a variety of serious complications
- Rate of acute surgical complications
- Patients' assessment of urinary, sexual, and bowel functioning after treatment
- Patients' satisfaction with treatment choice, continence, and potency

Some of these measures would need to be adjusted for factors such as the patient's age, life expectancy, the stage of the disease, history of other cancers, insurance, education, and income.

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